



Gateway Energy and Coke Company

2585 Edwardsville Road

Granite City, Illinois 62040

November 6, 2015

Mr. Ray Pilapil
Illinois Environmental Protection Agency
Division of Air Pollution Control – Permits Section
1021 North Grand Ave East
Springfield, IL 62794
Fed Ex Tracking Number: 7749 1835 5528

Gateway Energy and Coke Company, LLC
Application for Construction Permit
Facility ID: 119040ATN

Mr. Pilapil:

Gateway Energy and Coke Company, LLC (GECC) operates a coke production facility located at 2585 Edwardsville Road, Granite City, IL. The facility operates under the construction permit 06070020, modified April 28, 2010.

The United States, the State of Illinois, the State of Ohio, Gateway Energy & Coke Company, LLC (GECC), Haverhill Coke Company, LLC (HNCC) and SunCoke Energy, Inc. (SunCoke) are parties to a Consent Decree (CD) lodged in the U.S. District Court for the Southern District of Illinois with an Effective Date of November 7, 2014.

Pursuant to Paragraphs 9 and 10 of the CD, GECC is required to design, construct, install, and operate a redundant Heat Recovery Steam Generator (HRSG). Attached is an application for construction of the redundant HRSG at GECC.

Please feel free to contact me at (618) 512-4918 with any questions or comments.

Sincerely,

Chris DeCioccio
Environmental Manager

Enclosure: Gateway Energy and Coke Company Application for Construction Permit

**Application for Construction
Permit for a Redundant
HRSG**

**Gateway Energy &
Coke Company**

Facility ID: 119040ATN

November 2015

**Prepared for:
Gateway Energy & Coke Company
Granite City, Illinois**



**Prepared by:
AECOM
Oak Ridge, Tennessee**

APPLICATION FOR CONSTRUCTION PERMIT
FOR A REDUNDANT HRSG

GATEWAY ENERGY & COKE COMPANY

FACILITY ID: 119040ATN

Prepared for:

Gateway Energy and Coke Company
2585 Edwardsville Road
Granite City, IL 62040

Prepared by:

AECOM Technical Services, Inc.
105 Mitchell Road, Suite 200
Oak Ridge, TN 37830

November 2015

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1.0 INTRODUCTION

Gateway Energy and Coke Company (GECC) operates a heat recovery coke making facility adjacent to United States Steel's Granite City Works (GCW) in Granite City, Illinois. The GECC facility consists of 120 heat recovery coke ovens and 6 Heat Recovery Steam Generators (HRSG).

SunCoke Energy, Inc., GECC, and Haverhill Coke Company, LLC (HCC) entered into a Consent Decree (CD) with the United States and the States of Illinois and Ohio to resolve alleged Clean Air Act (CAA) violations. This CD became effective on November 7, 2014. The CD requires GECC to install a redundant HRSG to minimize the need to vent directly to the atmosphere during scheduled maintenance of the existing HRSGs. Overall emissions will decrease once the redundant HRSG is online and consequently does not require permitting under federal Prevention of Significant Determination (PSD) regulations or under the Illinois New Source Review (NSR) regulations in 35 Ill. Adm. Code 203.

2.0 REDUNDANT HRSG PROJECT DESCRIPTION

A brief description of this construction project is provided here. Under the current design, in the normal operating mode of the coke oven batteries, the flue gas from the coke ovens is directed through the common tunnel to one of six existing HRSGs and then to the Spray Dryer (SD)/Fabric Filter (FF) system, before being discharged to the atmosphere via the main stack. Each HRSG is designed to handle the flue gas from 20 ovens. Periodically, the HRSGs must be taken offline to perform required inspections and maintenance. During this time, the flue gas from the ovens associated with the offline HRSG will vent directly to atmosphere through the associated bypass vent stack (referred to as *waste heat stack* in the current construction permit). Flue gas is also vented directly to atmosphere via the six bypass vent stacks or through the main stack during SD/FF maintenance.

Under this redundant HRSG project, GECC will construct a redundant HRSG and a gas sharing tunnel for the coke batteries. The redundant HRSG is not an emission unit or a pollution

control device, but will reduce the need for bypass venting during HRSG maintenance, therefore reducing emissions from bypass venting. The redundant HRSG will have sufficient capacity to accommodate the flue gas from 20 ovens. The gas sharing tunnel will run parallel to the existing common tunnel and tie into the existing hot ducts on the inlet side of the HRSGs. Figure 1 shows the proposed location of the redundant HRSG and the gas sharing tunnel. The gas sharing tunnel will enable improved gas sharing across the coke oven battery such that gases can be shifted to the remaining online HRSGs when a HRSG is offline for inspection and maintenance. The redundant HRSG will provide additional gas cooling capacity which will allow a HRSG to be taken offline without opening the associated bypass vent stack. This gas sharing design will reduce the need for bypass stack venting during maintenance of the HRSGs, thereby reducing emissions from bypass venting. Bypass stack venting would still occur during SD/FF maintenance. Overall emissions of Particulate Matter (PM) and Sulfur Dioxide (SO₂) are expected to decrease once the redundant HRSG is operational.

Table 1 provides a comparison of the current permit limits for PM and SO₂ emissions during bypass venting and the new emission limits under the CD. While the current permit limits are based on annual totals, the new emission limits under the CD are based on 24-month totals. For comparison purposes, Table 1 shows the yearly equivalents of the new emission limits.

Table 1. Comparison of Existing and New Emission Limits for Bypass Venting^b

Unit	Existing Emission Limits (tons/yr)	Yearly Equivalents of New Emission Limits Imposed by the CD (tons/yr) ^a
PM	30.24	17.3
SO ₂	355.21	162.8

- a. Actual limits under the CD are based on 24-month rolling totals. CD limits were divided by 2 for comparison purposes to show the yearly equivalents
- b. Emissions of lead are also expected to decrease once the redundant HRSG is operational. Current construction permit limits emission of lead to 0.06 tons/yr, which was based on old test data (from another plant – best available data at the time). Based on actual test data from a GECC bypass vent stack in 2010, GECC proposed a revised permit limit of 0.17 tons/yr for lead in the October 2010 permit modification request. The CD limits lead emissions to 0.188 tons/2 year, equivalent to 0.094 tons/yr.

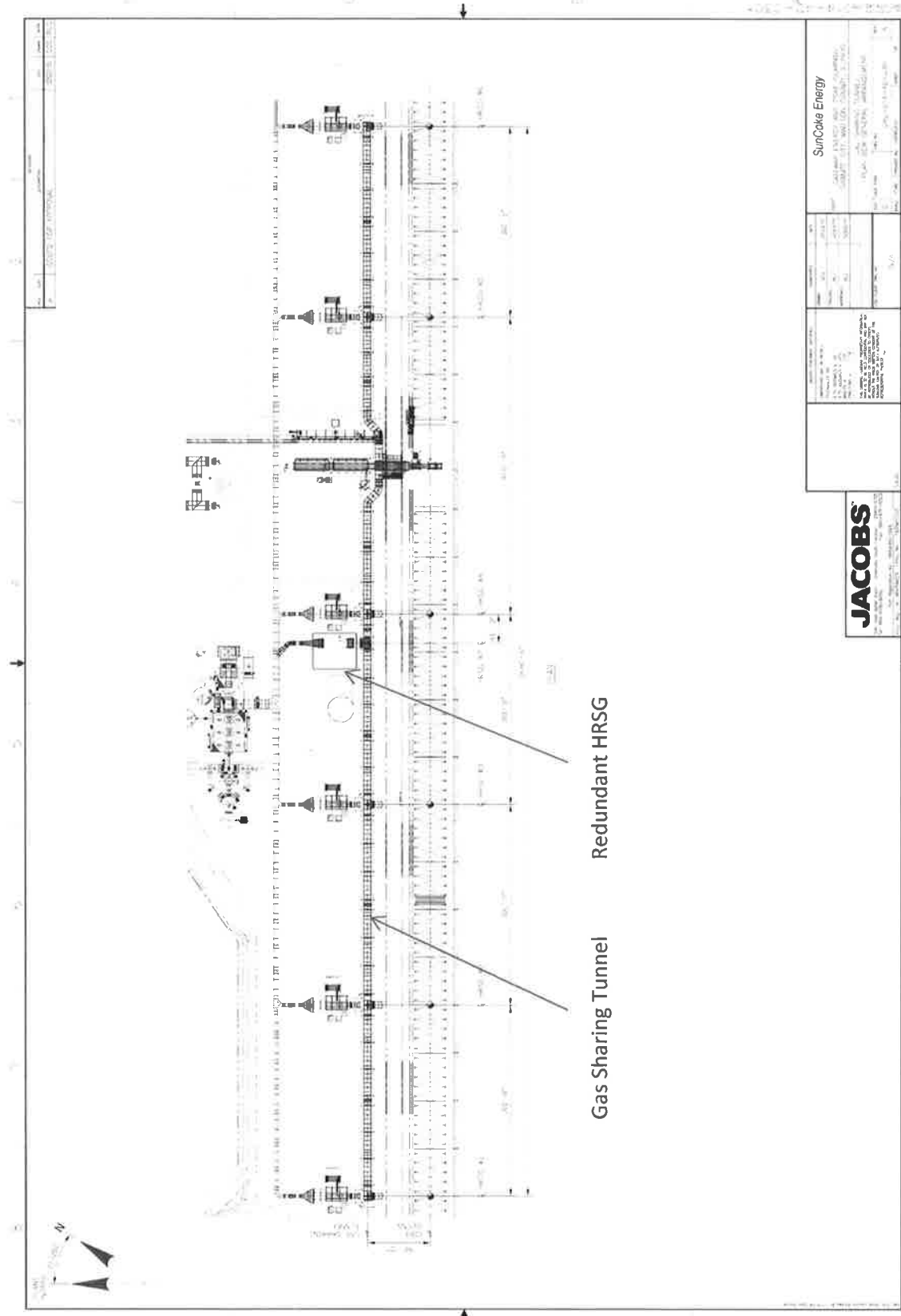


Figure 1. Proposed Location of Redundant HRSG and Gas Sharing Tunnel

3.0 APPLICABLE REGULATIONS

The CD lays out the applicable requirements for the redundant HRSG project. No other federal or state regulations are directly applicable to the redundant HRSG as it is not an emission unit.

Appendix A
ILLINOIS EPA FORMS



Illinois Environmental Protection Agency

Bureau of Air • 1021 North Grand Avenue East • P.O. Box 19506 • Springfield • Illinois • 62794-9506

FEE DETERMINATION FOR CONSTRUCTION PERMIT APPLICATION

FOR AGENCY USE ONLY

ID Number: _____ Permit #: _____
☐ Complete ☐ Incomplete Date Complete: _____
Check Number: _____ Account Name: _____

This form is to be used to supply fee information that must accompany all construction permit applications. This application must include payment in full to be deemed complete. Make check or money order payable to the Illinois Environmental Protection Agency, Division of Air Pollution Control - Permit Section at the above address. Do NOT send cash. Refer to instructions (197-INST) for assistance.

Source Information

1. Source Name: Gateway Energy and Coke Company
2. Project Name: Construction of redundant HRSG 119040ATN
3. Source ID #: (if applicable) _____
4. Contact Name: Chris DeCioccio 618.512.4918
5. Contact Phone #: _____

Fee Determination

6. The boxes below are automatically calculated.

Section 1 Subtotal \$0.00 + Section 2, 3 or 4 Subtotal \$500.0 = \$500.00
Grand Total

Section 1: Status of Source/Purpose of Submittal

7. Your application will fall under only one of the following five categories described below. Check the box that applies. Proceed to applicable sections. For purposes of this form:

- **Major Source** is a source that is required to obtain a CAAPP permit.
- **Synthetic Minor Source** is a source that has taken limits on potential to emit in a permit to avoid CAAPP permit requirements (e.g., FESOP).
- **Non-Major Source** is a source that is not a major or synthetic minor source.

- ☒ Existing source without status change or with status change from synthetic minor to major source or vice versa. Proceed to Section 2.
- ☐ Existing non-major source that will become synthetic minor to major source. Proceed to Section 4.
- ☐ New major or synthetic minor source. Proceed to Section 4.
- ☐ New non-major source. Proceed to Section 3.
- ☐ AGENCY ERROR. If this is a timely request to correct an issued permit that involves only an agency error and if the request is received within the deadline for a permit appeal to the Pollution Control Board. Skip Sections 2, 3 and 4. Proceed directly to Section 5.
- \$0.00
Section 1 Subtotal

This agency is authorized to require and you must disclose this information under 415 ILCS 5/39. Failure to do so could result in the application being denied and penalties under 415 ILCS 5 ET SEQ. It is not necessary to use this form in providing this information. This form has been approved by the forms management center.

Section 2: Special Case Filing Fee

8. **Filing Fee.** If the application only addresses one or more of the following, check the appropriate boxes, skip Sections 3 and 4 and proceed directly to Section 5. Otherwise, proceed to Section 3 or 4 as appropriate.

- ☒ Addition or replacement of control devices on permitted units.
- ☐ Pilot projects/trial burns by a permitted unit
- ☐ Land remediation projects
- ☐ Revisions related to methodology or timing for emission testing
- ☐ Minor administrative-type change to a permit

Section 3: Fees for Current or Projected Non-Major Sources

9. ☐ This application consists of a single new emission unit or no more than two modified emission units. (\$500 fee) 9. \$0.00
10. ☐ This application consists of more than one new emission unit or more than two modified units. (\$1,000 fee) 10. \$0.00
11. ☐ This application consists of a new source or emission unit subject to Section 39.2 of the Act (i.e., Local Siting Review); a commercial incinerator or a municipal waste, hazardous waste, or waste tire incinerator; a commercial power generator; or an emission unit designated as a complex source by agency rulemaking. (\$15,000 fee) 11.
12. ☐ A public hearing is held (see instructions). (\$10,000 fee) 12.
13. Section 3 subtotal. (lines 9 through 12 - entered on page 1) 13. \$0.00

Section 4: Fees for Current or Projected Major or Synthetic Minor Sources

Application contains modified emission units only	14. For the first modified emission unit, enter \$2,000.	14. <u> </u> \$0.00
	15. Number of additional modified emission units = <u> </u> x \$1,000.	15. <u> </u> \$0.00
	16. Line 14 plus line 15, or \$5,000, whichever is less.	16. <u> </u> \$0.00
Application contains new and/or modified emission units	17. For the first new emission unit, enter \$4,000.	17. <u> </u> \$0.00
	18. Number of additional new and/or modified emission units = <u> </u> x \$1,000.	18. <u> </u> \$0.00
	19. Line 17 plus line 18, or \$10,000, whichever is less.	19. <u> </u> \$0.00
Application contains netting exercise	20. Number of individual pollutants that rely on a netting exercise or contemporaneous emissions decrease to avoid application of PSD or nonattainment area NSR = <u> </u> x \$3,000.	20. <u> </u> \$0.00
Additional Supplemental Fees	21. If the new source or emission unit is subject to Section 39.2 of the Act (i.e. siting); a commercial incinerator or other municipal waste, hazardous waste, or waste tire incinerator; a commercial power generator; or one or more other emission units designated as a complex source by Agency rulemaking, enter \$25,000.	21. <u> </u>
	22. If the source is a new major source subject to PSD, enter \$12,000.	22. <u> </u>
	23. If the project is a major modification subject to PSD, enter \$6,000.	23. <u> </u>
	24. If this is a new major source subject to nonattainment area (NAA) NSR, enter \$20,000.	24. <u> </u>
	25. If this is a major modification subject to NAA NSR, enter \$12,000.	25. <u> </u>
	26. If the application involves a determination of MACT for a pollutant and the project is not subject to BACT or LAER for the related pollutant under PSD or NSR (e.g., VOM for organic HAP), enter \$5,000 per unit for which a determination is requested or otherwise required. <u> </u> x \$5,000.	26. <u> </u> \$0.00
	27. If a public hearing is held (see instructions), enter \$10,000.	27. <u> </u>
28. Section 4 subtotal (line 16 and lines 19 through 28) to be entered on page 1		28. <u> </u> \$0.00

Section 5: Certification

NOTE: Applications without a signed certification will be deemed incomplete.

29. I certify under penalty of law that, based on information and belief formed after reasonable inquiry, the information contained in this fee application form is true, accurate and complete.

by: Don Vichitvongsa

Signature

Don Vichitvongsa

Typed or Printed Name of Signatory

General Manager

Title of Signatory

11/6/2015

Date



Illinois Environmental Protection Agency
Division Of Air Pollution Control -- Permit Section
P.O. Box 19506
Springfield, Illinois 62794-9506

Construction Permit Application for a Proposed Project at a CAAPP Source	For Illinois EPA use only
	ID No.:
	Appl. No.:
	Date Rec'd:
Chk No./Amt:	

This form is to be used to supply general information to obtain a construction permit for a proposed project involving a Clean Air Act Permit Program (CAAPP) source, including construction of a new CAAPP source. Detailed information about the project must also be included in a construction permit application, as addressed in the "General Instructions For Permit Applications," Form APC-201.

Proposed Project
1. Working Name of Proposed Project: Construction of redundant HRSG
2. Is the project occurring at a source that already has a permit from the Bureau of Air (BOA)? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes If Yes, provide BOA ID Number: 119040ATN
3. Does this application request a revision to an existing construction permit issued by the BOA? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If Yes, provide Permit Number: _____
4. Brief Description of Proposed Project: Installation of redundant Heat Recovery Steam Generator

Source Information		
1. Source name:* Gateway Energy and Coke Company		
2. Source street address:* 2585 Edwardsville Road		
3. City: Granite City	4. County: Madison	5. Zip code:* 62040
ONLY COMPLETE THE FOLLOWING FOR A SOURCE WITHOUT AN ID NUMBER.		
6. Is the source located within city limits? <input type="checkbox"/> Yes <input type="checkbox"/> No If no, provide Township Name: _____		
7. Description of source and product(s) produced:	8. Primary Classification Code of source: SIC: _____ or NAICS: _____	
9. Latitude (DD:MM:SS.SSSS):	10. Longitude (DD:MM:SS.SSSS):	

* Is information different than previous information? ☐ Yes ☐ No
If yes, then complete Form CAAPP 273 to apply for an Administrative Change to the CAAPP Permit for the source.

Identification of Permit Applicant	
1. Who is the applicant? <input type="checkbox"/> Owner <input checked="" type="checkbox"/> Operator	2. All correspondence to: (check one) <input type="checkbox"/> Source <input type="checkbox"/> Owner <input checked="" type="checkbox"/> Operator
3. Applicant's FEIN:	4. Attention name and/or title for written correspondence: Chris DeCioccio, Environmental Manager

This Agency is authorized to require and you must disclose this information under 415 ILCS 5/39. Failure to do so could result in the application being denied and penalties under 415 ILCS 5 et seq. It is not necessary to use this form in providing this information. This form has been approved by the forms management center.

Owner Information*		
1. Name: SunCoke Energy		
2. Address: 1011 Warrenville Road, Suite 600		
3. City: Lisle	4. State: IL	5. Zip code: 60532

* Is this information idifferent than previous information? ☐ Yes ☐ No
 If yes, then complete Form CAAPP 273 to apply for an Administrative Change to the CAAPP Permit for the source.

Operator Information (if different from owner)*		
1. Name Gateway Energy and Coke Company		
2. Address: 2585 Edwardsville Road		
3. City: Granite City	4. State: IL	5. Zip code: 62040

* Is this information different than previous information? ☐ Yes ☒ No
 If yes, then complete Form CAAPP 273 to apply for an Administrative Change to the CAAPP Permit for the source.

Technical Contacts for Application	
1. Preferred technical contact: (check one) <input checked="" type="checkbox"/> Applicant's contact <input type="checkbox"/> Consultant	
2. Applicant's technical contact person for application: Chris DeCioccio	
3. Contact person's telephone number(s): 618-512-4918	4. Contact person's e-mail address: CMDECIOCCIO@SUNCOKE.COM
5. Consultant for application:	
6. Consultant's telephone number(s):	7. Consultant's e-mail address:

Other Addresses for the Permit Applicant	
ONLY COMPLETE THE FOLLOWING FOR A SOURCE WITHOUT AN ID NUMBER.	
1. Address for billing Site Fees for the source: <input type="checkbox"/> Source <input type="checkbox"/> Other (provide below):	
2. Contact person for Site Fees:	3. Contact person's telephone number:
4. Address for Annual Emission Report for the source: <input type="checkbox"/> Source <input type="checkbox"/> Other (provide below):	
5. Contact person for Annual Emission Report:	6. Contact person's telephone number:

Review Of Contents of the Application	
NOTE: ANSWERING "NO" TO THESE ITEMS MAY RESULT IN THE APPLICATION BEING DEEMED INCOMPLETE	
1. Does the application include a narrative description of the proposed project?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2. Does the application clearly identify the emission units and air pollution control equipment that are part of the project?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3. Does the application include process flow diagram(s) for the project showing new and modified emission units and control equipment, along with associated existing equipment and their relationships?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
4. Does the application include a general description of the source, a plot plan for the source and a site map for its location?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A* * Material previously provided
5. Does the application include relevant technical information for the proposed project as requested on CAAPP application forms (or otherwise contain all relevant technical information)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
6. Does the application include relevant supporting data and information for the proposed project as provided on CAAPP forms?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
7. Does the application identify and address all applicable emission standards for the proposed project, including: State emission standards (35 IAC Chapter I, Subtitle B); Federal New Source Performance Standards (40 CFR Part 60)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
8. Does the application address whether the project would be a major project for Prevention of Significant Deterioration, 40 CFR 52.21?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
9. Does the application address whether the project would be a major project for "Nonattainment New Source Review," 35 IAC Part 203?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
10. Does the application address whether the proposed project would potentially be subject to federal regulations for Hazardous Air Pollutants (40 CFR Part 63) and address any emissions standards for hazardous air pollutants that would be applicable?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A* * Source not major <input type="checkbox"/> Project not major <input checked="" type="checkbox"/>
11. Does the application include a summary of annual emission data for different pollutants for the proposed project (tons/year), including: 1) The requested permitted emissions for individual new, modified and affected existing units*, 2) The past actual emissions and change in emissions for individual modified units* and affected existing units*, and 3) Total emissions consequences of the proposed project? (* Or groups of related units)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A* * The project does not involve an increase in emissions from new or modified emission units.
12. Does the application include a summary of the current and requested potential emissions of the source (tons/year)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A* * Applicability of PSD, NA NSR or 40 CFR 63 to the project is not related to the source's emissions.
13. Does the application address the relationships and implications of the proposed project on the CAAPP Permit for the source?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A* * CAAPP Permit not issued
14. If the application contains information that is considered a TRADE SECRET, has it been properly marked and claimed and all requirements to properly support the claim pursuant to 35 IAC Part 130 been met? Note: "Claimed" information will not be legally protected from disclosure to the public if it is not properly claimed or does not qualify as trade secret information.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A* * No information in the application is claimed to be a TRADE SECRET
15. Are the correct number of copies of the application provided? (See Instructions for Permit Applications, Form 201)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
16. Does the application include a completed "FEE DETERMINATION FOR CONSTRUCTION PERMIT APPLICATION," Form 197-FEE, a check in the amount indicated on this form, and any supporting material needed to explain how the fee was determined?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Signature Block

Authorized Signature:

I certify under penalty of law that, based on information and belief formed after reasonable inquiry, the statements and information contained in this application are true, accurate and complete and that I am a responsible official for the source, as defined by Section 39.5(1) of the Environmental Protection Act.

BY:


AUTHORIZED SIGNATURE

General Manager

TITLE OF SIGNATORY

Don Vichitvongsa

TYPED OR PRINTED NAME OF SIGNATORY

11 - 6 - 2015
DATE

0000000000759

GATEWAY ENERGY & COKE COMPANY L
1011 Warrenville Road
Suite 600
Liste, IL 60532

JPMorgan Chase Bank, N.A.
Syracuse, NY
50-937/213

DATE 11/5/2015

AMOUNT ** 500.00

Five Hundred Dollars and 00 Cents

PAY
TO THE
ORDER
OF

ILLINOIS EPA
PERMIT SECTION
P O BOX 19276
SPRINGFIELD IL 62794-9276

[Signature]

[Signature]

CHECK IS PRINTED ON SECURITY PAPER WHICH INCLUDES A MICROPRINT BORDER & FLUORESCENT FIBERS

⑈000759⑈ ⑆021309379⑆ 657580192⑈